

# Honors Chemistry - VSEPR/IMFs Problem Set

Stasya

1. In the bond P-Cl vs P-Br, circle the more polar bond and use an arrow to show the direction of polarity in each bond.
2. Identify the bond Na-Cl as ionic, polar covalent, or nonpolar covalent.
3. Identify the main intermolecular force in  $\text{CCl}_4$ .
4. Explain the differences between dipole-dipole forces and hydrogen bonding.
5. Why is silicon tetrabromide a liquid at room temperature while silicon tetraiodide is a solid at room temperature?
6. Draw a lewis structure for  $\text{CS}_2$ .
7. Draw a lewis structure for  $\text{SF}_6$ .
8. Draw a lewis structure for  $\text{SO}_4^{2-}$ . What is the molecular geometry, the hybridization, and the bond angle of this molecule?